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P 252331Z multi
FM NPIC

27 NOV 1964
HFS
WCB
CIC
TNS
ACE
-OPS FILES-

1964 NOV 26 00 28Z

25X1

OUT54533

YWQLAZC/AFSSO SAC
YWQLAZC/AFSSO ACIC
YWQLAZC/AFSSO FTD
AFSSO USAFE
AFSSO PACAF
OPCEN
ZEM
T O P S E C R E T.

25X1

SSOS PASS TO APPROPRIATE TCOS. CITE NPIC 3362.

25X1

SUBJECT: CAMERA INFORMATION FOR MISSION 1014-1.

A. THIS PHOTOGRAPHY INVOLVES THE USE OF EIGHT CAMERA: TWO MAIN CAMERAS, FOUR HOCIZON CAMERAS, A STELLAR CAMERA, AND AN INDEX CAMERA.

B. OPERATIONAL FOCAL LENGTHS (MM)

	MAIN	HORIZON PORT	HORIZON STARBOARD	STELLAR	INDEX
FWD UNIT	609.577	54.42	54.50	(PART 1) 83.8050	37.9419
AFT UNIT	609.602	55.02	55.10	(PART 2) 83.9491	38.2274

C. LENS DISTORTION (PIN CUSHION) MM

(1) MAIN LENS	3	2	1	0	359	358	357
FWD UNIT	.006	.004	.001	.000	N/A	N/A	N/A
AFT UNIT	.003	.002	.000	.000	.000	.001	.002

25X1

Declassification Review by NGA/DoD

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(2) HORIZON CAMERAS (MM)	FWB		AFT	
	PORT	STARBOARD	PORT	STARBOARD
(RADIAL) 10 DEGREES	.003	.000	.003	.004
20 DEGREES	.009	MINUS .001	.001	.006
(TANGENTIAL) MAX VECTOR	.006	N/A	.005	.002

D. DEPRESSION AMGLES OF HORIZON CAMERAS RELATIVE TO NOMINAL MAIN CAMERA

	PORT	STARBOARD
FWD	15 DEGREES 25 MIN.	15 DEGREES 23 MIN.
AFT	15 DEGREES 02 MIN.	14 DEGREES 48 MIN.

E. CAMERA FILTER AND EXPOSURE DATA

	MAIN	HORIZON	STELLAR	INDEX
FILTER	SEE PARA. L-1	WRATTEN 25	NONE	WRATTEN 21
APERTURE	STARBOARD F 8.0		F 1.8	F 4.5
	PORT F 6.8			
SLIT WIDTH/EXPOSURE		1/100 SEC.	2.0 SEC.	1/500 SEC.
FILM		4404	4401	4400

F. RESOLUTION CAPABILITIES

(1) (L/MM AVG)	MAIN	PORT HORIZON	STARBOARD HORIZON
FWD	189	100.6	N/A
AFT	190	82.9	89.4

(2) INDEX (L/MM AWAR) PART 1 71.4 PART 2 73.9

G. TIMING MARKS

FREQUENCY MARKS WILL APPEAR ON THE FILM AT A RATE OF 200 CYCLES PER SECOND.

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H. CALIBRATED ANGLES OF CAMERAS

(1) CONVERGENT ANGLE (SEE PARA L-2) 29 DEGREES 53 MIN.

(2) CALIBRATED ANGLE BETWEEN STELLAR AND INDEX CAMERAS

(PART 1) 89 DEGREES 50 MIN.

(PART 2) 89 DEGREES 59 MIN.

I. IMAGE MOTION COMPENSATION DATA

A. CYCLE RATE (CPS) AND GROUND ANGULAR VELOCITY (GAV IN RAD/SEC)

REF. LEVEL		AMPL. LEVEL	
NO.	CPS.	NO.	CPS.
6	.3506	6	.0806
	GAV.		GAV.
	.0317		.0073

B. PASSES: REF. 6, AMPL. 6:1D1 THRU 79D1

J. PROGRAM TIME DATA

PASS	CAMERA ON TIME (ZEBRA TIME) DAY	HOUR	MIN	SEC	PROGRAM ON TIME UP RAMP SEC	PROGRAM DURATION SEC
1D1	18	22	05	12	2029	33
2D1	SEE PARA L-3					
3D1	0	01	02	57	1916	92
4D1	19	02	30	05	1756	103
4D2	19	02	33	55	1987	56
6D1	19	05	32	09	1909	57
6D2	19	05	36	09	2149	55
6D3	19	05	38	27	2287	135
7D1	19	07	01	47	1904	93
7D2	19	07	04	08	2044	90
8D1	19	08	31	07	1876	216

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9AE	19	09	42	38	792	51
10D1	19	11	45	45	2793	55
14D1	19	17	39	34	2487	53
16D1	19	20	34	47	2231	39
17D1	19	21	56	04	1726	64
21D1	20	03	59	38	2008	58
21D2	20	04	01	21	2110	187
22D1	20	05	27	55	1920	57
22D2	20	05	31	06	2110	394
23D1	20	06	54	40	1742	62
23D2	20	06	56	58	1880	279
26D1	20	11	32	11	2239	55
30D1	20	17	35	20	2500	62
32D1	20	20	30	36	2252	40
33D1	20	21	51	53	1747	64
35D1	21	00	51	21	1752	107
37D1	21	03	57	29	2157	122
37D2	21	04	00	52	2359	72
38D1	21	05	24	30	1995	102
38D2	21	05	30	27	2352	191
39D1	21	06	50	14	1758	64
39D2	21	06	52	33	1897	58
39D3	21	06	55	41	2085	190
41AE	21	09	34	18	839	49
41D1	21	09	54	52	2073	165
46D1	21	17	30	27	2497	70

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47D1	21	18	57	30	2340	57
48D1	21	20	26	05	2272	40
51D1	22	00	46	44	1770	151
51D2	22	00	51	56	2082	56
52D1	22	02	16	26	1772	208
52D2	22	02	21	02	2048	58
52D3	22	02	23	02	2166	55
53D1	22	03	46	56	1820	102
53D2	22	03	50	11	2015	57
53D3	22	03	56	15	2380	151
54D1	22	05	16	15	1797	85
54D2	22	05	18	58	1960	164
54D3	22	05	23	15	2217	57
54D4	22	05	26	14	2396	142
55D1	22	06	45	27	1769	208
55D2	22	06	51	11	2114	72
55D3	22	06	52	59	2222	80
56D1	22	08	19	43	2053	225
57AE	22	09	29	24	855	48
62D1	22	17	21	55	2295	56
62D2	22	17	25	39	2518	55
64D1	22	20	21	12	2294	40
67D1	23	00	42	55	1860	101
68D1	23	02	11	28	1793	150
68D2	23	02	18	02	2187	57
69D1	23	03	45	09	2035	58

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69D2	23	03	51	14	2400	151
70D1	23	05	15	24	2072	74
70D2	23	05	18	04	2232	56
71D1	23	06	40	35	1805	64
71D2	23	06	42	35	1924	59
71D3	23	06	46	20	2150	74
72D1	23	08	12	04	1906	80
72D2	23	08	14	16	2039	110
73AE	23	09	24	32	877	48
78D1	23	17	20	27	2538	64
79D1	23	18	47	37	2391	55

NOTE: DATA IS THE SAME FOR BOTH THE MASTER (FWD) AND SLAVE (AFT) UNITS EXCEPT WHERE NOTED.

K. TIME CORRELATION (MILLISECONDS)

PASS	SYSTEM TIME	CLOCK TIME	DIFFERENCE
0	68994.763	310459.368	
0	69081.651	310546.256	0
9	35026.074	362890.682	.003
16	74148.570	402013.180	.002
25	34690.473	448955.086	.003
32	73898.961	488163.576	.002
41	34523.989	535188.607	.003
48	73628.286	37421.994	.002
57	34229.195	84422.906	.003
64	73334.065	123527.779	.003
73	33937.690	170531.406	.002

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79 67733.270 204326.988 .002

NOTE: ALL DIFFERENCE VALUES ARE PLUS.

L. REMARKS

1. MAIN CAMERA FILTER AND EXPOSURE DATA AS FOLLOWS:

	MASTER	SLAVE
FILTER	WRATTEN 25	WRATTEN 21
APERTURE	F 3.5	F 3.5
SLIT WIDTH	0.250 INCH	0.175 INCH
FILM	4404	4404

2. BECAUSE THE MAIN UNITS 162 AND 139 WERE NOT CALIBRATED AS A SYSTEM, THE REPORTED CONVERGENT ANGLE IS QUESTIONABLE.

3. PASS D2 HAD INTERMITTENT FWD MONO OPERATION AND AFT MONO OPERATION ACCORDING TO THE FOLLOWING TIMES.

	ON TIME				TUR	DURATION
2D FWD	18	23	29	42	1708	126
2D AFT	18	23	29	42	1708	24
2D AFT	18	23	31	35	1822	14

4. THE S/I UNIT NUMBERS ARE:

PART 1 D 53/59/49

PART 2 D 50/44/46

GP-1

T O P S E C R E T

--END OF MESSAGE--

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